

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.

**Claim Amendments:**

1. (Currently Amended) A disposable absorbent article comprising:  
a topsheet;  
a backsheet; and  
an absorbent core disposed therebetween;  
wherein said absorbent core is constructed of an absorbent composite

including

an absorbent layer of hydratable fine fibers in the form of microfibril obtained from cellulose or a derivative thereof, and super absorbent polymer (SAP) particles bonded together by said hydratable fibers, a coating of mineral oil over the SAP particles of the absorbent layer, said coating being adapted to retard the initial receipt of liquid by the SAP in the absorbent layer; and

a nonwoven substrate supporting said absorbent layer, said absorbent layer being coated thereupon; and

01 a pair of longitudinally-extending, upstanding cuffs spaced laterally from said core, each said cuff including a folded portion of said topsheet and a longitudinally-extending absorbent composite secured within said folded portion, said longitudinally-extending absorbent composite including an absorbent layer of hydratable fine fibers in the form of microfibril obtained from cellulose or a derivative thereof, and super absorbent polymer (SAP) particles bonded together by said hydratable fibers, and a nonwoven substrate supporting said absorbent layer, said absorbent layer being coated thereupon;

wherein said core includes said first absorbent composite; and

wherein said first absorbent composite and said longitudinally extending absorbent composites of said cuffs are sections of one continuous absorbent composite structure positioned about a crotch region of said article; and

wherein said absorbent layer includes a low cross link SAP adapted to gel block upon wetting such that said backsheet is substantially impervious when wet and said backsheet is breathable when dry; and

wherein said SAP are water-swellaable particles included in a concentration in the range of about 50 g/m<sup>2</sup> to about 500 g/m<sup>2</sup>.

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Original) The article of claim 2, wherein said nonwoven substrate is a section of said topsheet.

6. (Canceled)

7. (Canceled)

DI 8. (Original) The absorbent article of claim 1, wherein said absorbent core includes a prefabricated sheet of said absorbent composite.

9. (Original) The absorbent article of claim 8, wherein said absorbent composite of said core includes a plurality of said absorbent layers, said layers being spaced apart from one another such that non-coated surface sections of said substrate are exposed therebetween.

10. (Original) The absorbent article of claim 9, wherein said non-coated surface sections form wicking zones between said absorbent layers.

11. (Original) The absorbent article of claim 8, wherein said absorbent layers are laterally spaced, elongated segments.

12. (Original) The absorbent article of claim 8, wherein said absorbent composite layer has a corrugated configuration characterized by a plurality of pleats at which distinct adjacent sections of said absorbent composite are mutually adhered.

13. (Original) The absorbent article of claim 1, wherein said absorbent composite forms said backsheet and said core, said backsheet having a section providing said nonwoven substrate and said absorbent layer being concentrated at a crotch region of said backsheet to form said absorbent core.

14. (Original) The absorbent article of claim 1, wherein said core includes said absorbent composite, said absorbent composite further including one or more of said absorbent layers disposed over said nonwoven substrate.

15. (Original) The absorbent article of claim 1, wherein said absorbent composite further includes a concentration of pulp material, said absorbent layer and said nonwoven substrate forming a sheet disposed about said pulp concentration such that said pulp concentration is disposed between at least two layers of said sheet of absorbent layer and nonwoven substrate.

DI 16. (Original) The absorbent article of claim 1, wherein said absorbent composite forms at least a portion of said topsheet and said absorbent core, said topsheet having a section providing said nonwoven substrate and said absorbent layer forming said core.

17. (Original) The absorbent article of claim 1, wherein said absorbent layer includes low-cross link, low gel strength SAP having free swell capacities of over 40 g/g and such that said absorbent layer is adapted to gel block upon wetting so as to be substantially impervious but is breathable when dry.

18. (Previously presented) A disposable absorbent article comprising:  
a topsheet;  
a backsheet;  
a pair of longitudinally-extending upstanding cuffs, each cuff having two  
sheet layers;  
an absorbent composite including  
an absorbent layer of hydratable fine fibers in the form of microfibril  
obtained from cellulose or a derivative thereof, and absorbent polymer (SAP) particles  
bonded together by said hydratable fibers, and  
a nonwoven substrate supporting said absorbent layer, said absorbent layer  
being coated thereupon; and  
wherein said absorbent layer is disposed between the topsheet and  
backsheets, and generally centrally at a location identified as a crotch region, said  
absorbent layer providing an absorbent core for absorbing bodily exudates received in  
said crotch region; and  
wherein said cuffs are spaced laterally from said absorbent core, and  
wherein said absorbent composite includes two longitudinally-extending composite  
sections extending upwardly from the crotch area into the cuffs and between the cuff  
layers, said absorbent composite forming an absorbent structure about the crotch region;  
and  
wherein said SAP are water-swellaable bodies included in a concentration of about  
20 gsm and said nonwoven substrate is an SMS having a basis weight in the range of  
about 10 gsm to 60 gsm.

19. (Original) The article of claim 18, wherein said absorbent layer is  
supported underneath a section of said topsheet, such that said section of said topsheet  
provides said nonwoven substrate of said absorbent composite.

21. (Original) The article of claim 18, wherein said absorbent composite located at said crotch region and said longitudinally extending absorbent composites of said cuffs are sections of one continuous absorbent composite structure positioned about the crotch region.

22. (Original) The article of claim 18, wherein said absorbent layer is supported on said backsheet, such that a section of said backsheet provides said nonwoven substrate of said absorbent composite.

23. (Currently amended) The article of claim [20] 18, wherein said absorbent layer includes a low cross link SAP adapted to gel block upon wetting such that said backsheet is substantially impervious when wet and said backsheet is breathable when dry.

24. (Canceled)

28. (Original) The absorbent article of claim 18, wherein said absorbent composite further includes a concentration of pulp material, said absorbent layer and said nonwoven substrate forming a sheet disposed about said pulp concentration such that said pulp concentration is disposed between at least two layers of said sheet of absorbent layer and nonwoven substrate.

30. (Previously presented) In a disposable absorbent having an absorbent core disposed between a topsheet and a backsheet, a prefabricated absorbent composite comprising:

an absorbent layer of hydratable fine fibers in the form of microfibril obtained from cellulose or a derivative thereof, and absorbent polymer (SAP) particles bonded together by said hydratable fibers, and

a nonwoven substrate supporting said absorbent layer, said absorbent layer being coated thereupon;

wherein said absorbent layer is disposed between the topsheet and backsheet, and generally centrally in the article at a location identified as a crotch region, said absorbent layer providing an absorbent core for absorbing bodily exudates received by the crotch region; and

wherein the article includes a pair of longitudinally-extending, upstanding cuffs spaced laterally from said absorbent core, each cuff having two sheet layers, and wherein said absorbent composite includes two longitudinally-extending composite sections extending upwardly from the crotch region into the cuffs and between the cuff layers, said absorbent composite forming an absorbent structure about the crotch region; and

wherein said absorbent layer includes a low cross link SAP adapted to gel block upon wetting such that said backsheet is substantially impervious when wet and said backsheet section is breathable when dry.

31. (Original) The absorbent composite of claim 30, wherein said absorbent layer is supported underneath a section of the topsheet, such that said section of topsheet provides said nonwoven substrate of said absorbent composite.

32. (Canceled)

33. (Original) The absorbent composite of claim 30, wherein said absorbent layer is supported on a section of the backsheet, such that said backsheet section provides said nonwoven substrate of said absorbent composite.

34. (Canceled)

35. (Original) The absorbent composite of claim 34, wherein said low cross-link SAP is low-gel strength SAP characterized by a free swell capacity greater than about 40 g/g.

36. (Original) The absorbent composite of claim 30, wherein said SAP are water-swellaable bodies included in a concentration of about 50 gsm to 500 gsm.

DA 37. (Original) The absorbent composite of claim 30, wherein said absorbent composite of said core includes a plurality of said absorbent layers, said layers being spaced apart from one another such that non-coated surface sections of said substrate are exposed therebetween, said non-coated surface sections forming wicking zones between said absorbent layers.

38. (Original) The absorbent composite of claim 30, further comprising a coating of mineral oil over the SAP particles of the absorbent layer, said coating being adapted to retard the initial receipt of liquid by the SAP in the absorbent layer.



39. (Currently Amended) A disposable absorbent article comprising:

- a topsheet;
- a backsheet;
- a pair of longitudinally-extending upstanding cuffs, each cuff having two sheet layers;
- an absorbent composite including
  - an absorbent layer of hydratable fine fibers in the form of microfibril obtained from cellulose or a derivative thereof, and absorbent polymer (SAP) particles bonded together by said hydratable fibers, wherein said cuffs are spaced laterally from said absorbent core, and wherein said absorbent composite includes two longitudinally-extending composite sections extending upwardly from the crotch area into the cuffs and between the cuff layers, said absorbent composite forming an absorbent structure about the crotch region, and
  - a nonwoven substrate supporting said absorbent layer, said absorbent layer being coated thereupon; and
- wherein said absorbent layer is disposed between the topsheet and backsheet, and generally centrally at a location identified as a crotch region, said absorbent layer providing an absorbent core for absorbing bodily exudates received in said crotch region; and[.]
- wherein said composite sections, includes low-cross link, low gel strength SAP having free swell capacities of over 40 g/g and such that said absorbent composite sections are adapted to gel block upon wetting so as to be substantially impervious but is breathable when dry and such that each said composite sections is swellable within said cuffs upon wetting.

---